

How MPOs Use CMAQ Funding for Alternative Fuel Vehicle and Infrastructure Projects

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



Clean Cities Webinar
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Linda Bluestein, U.S. Department of Energy
Jim Stack, Genesee Transportation Council
Jeff Sheffield, North Florida TPO

Clean Cities Mission

Energy, Environment, and Economic Security

Driving Sustainability with Clean Fuels and Advanced Vehicles



National and Local Partnerships



Building Partnerships to Cut Petroleum Use and GHG Emissions in Transportation

Clean Cities Coalitions



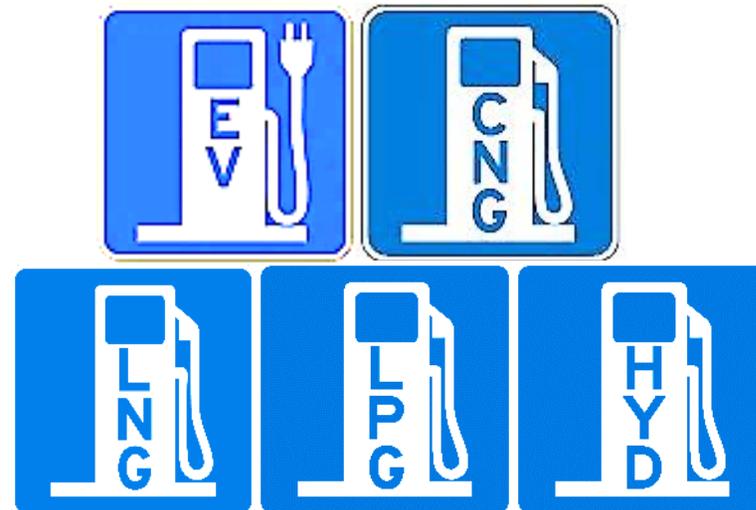
* Connecticut Clean Cities Include:
 - Norwich
 - New Haven
 - Connecticut Southwestern Area
 - Capitol Clean Cities (Hartford area)

Map Date: 04/12/16

Designated Alternative Fuel Corridors

- U.S. DOT designated alternative fuel corridors in November 2016
- Part of the Fixing America's Surface Transportation (FAST) Act
- Federal Highway Administration manages the process for designating new corridors or adding new fuels to existing corridors

http://www.fhwa.dot.gov/environment/alternative_fuel_corridors/



Important Web Sites and Resources

Clean Cities

cleancities.energy.gov

Alternative Fuels Data Center

afdc.energy.gov

FuelEconomy.gov

Clean Cities' Technical Response Service

Phone: 800-254-6735

Email: technicalresponse@icfi.com



U. S. Department of Energy

Using CMAQ to Support Alternative-Fueled Vehicles

James Stack
Executive Director

Agenda

- Background on GTC
- Nonattainment designation
- CMAQ Funding
- Project Selection
- Continued Collaboration
- Continuing Support for Alternative-Fueled Vehicles



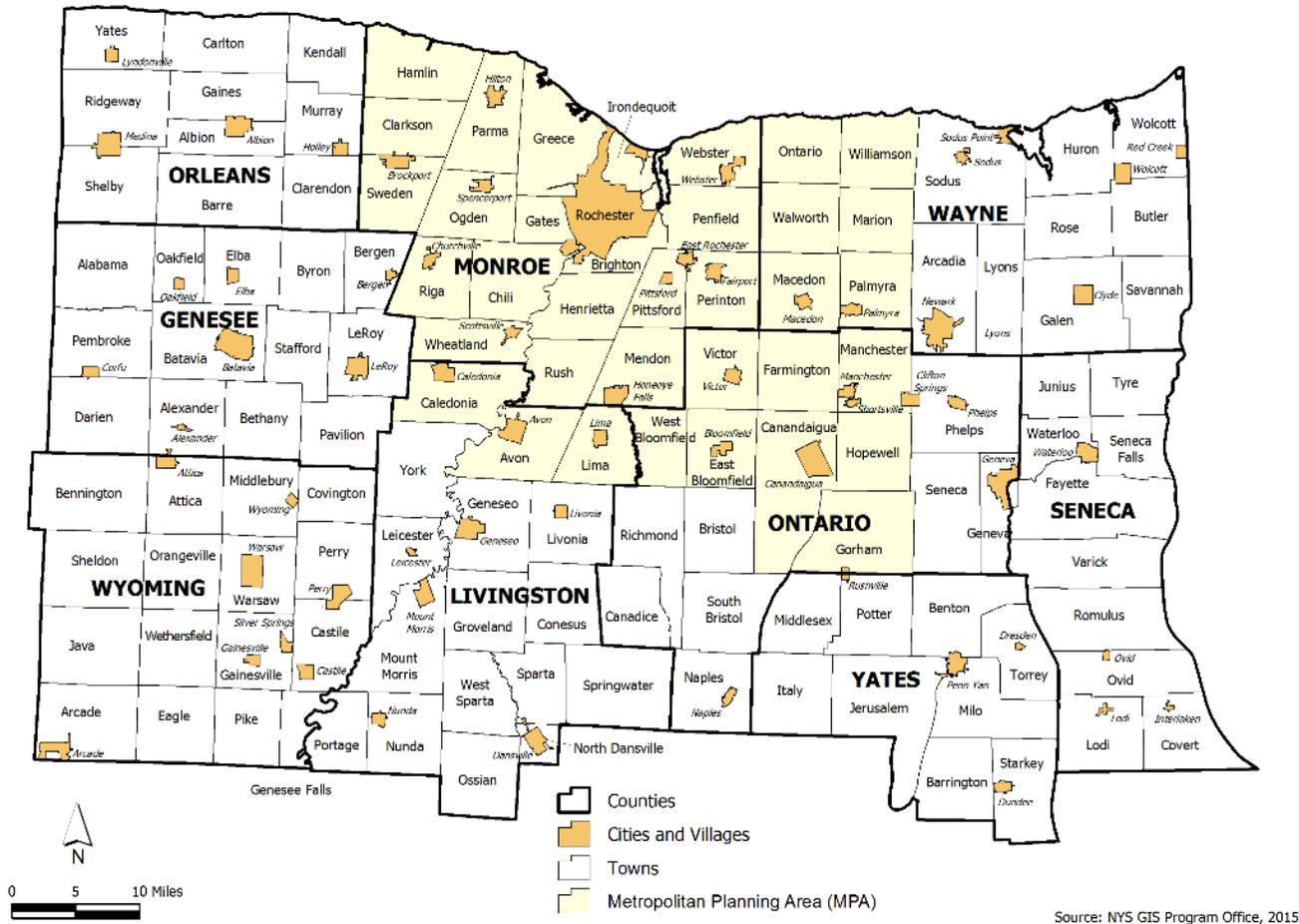
Genesee Transportation Council

- Metropolitan Planning Organization for the nine-county Genesee-Finger Lakes Region of NY State
 - ❑ Responsible for federally-funded transportation policy, planning, and investment decision making
 - ❑ Three Major Products
 - Long Range Transportation Plan (LRTP)
 - Unified Planning Work Program (UPWP)
 - Transportation Improvement Program (TIP)
- Our Mission
 - ❑ *To maximize the contribution of the transportation system to the social and economic vitality of the region*



GENESEE TRANSPORTATION COUNCIL

Genesee-Finger Lakes Region



CMAQ Funding



- First available for the FFY 2008 to 2012 TIP
- One of many sources of funds, all with specific eligibility criteria
- Average of \$12.5 million per year
- Included “backlog” of funding to nonattainment designation

Project Selection

- Genesee Region Clean Communities submitted an application to encourage the integration of alternative-fueled vehicles into public and private fleets
- GRCC was awarded \$2 million over 4 years
- CMAQ funds would cover 75% of incremental costs to purchase new alternative fueled vehicle or 75% of the cost to convert an existing vehicle
- Fuel was not limited to specific type



Continued Collaboration

- CMAQ funding in general and working with a non-municipal sponsor were new endeavors that needed to be figured out
- GRCC needed a municipal sponsor for funding to pass through and eventually partnered with the New York State Energy Research and Development Authority (NYSERDA)
- It took time to get various agreement in place so the project was delayed

Continued Collaboration

- TEA-21 had many extensions that did not grow the funding programs as expected
- GRCC award was cut to \$1.7 million over 2 funding rounds
- With a change in Air Quality standards, this region is no longer in nonattainment so there is no set allocation of CMAQ funds

Continued Collaboration

- New York State DOT required emissions benefit analyses before funding could be obligated
- Tools did not exist to conduct these analyses in our part of the state so we used spreadsheets and online tools to develop before and after analyses
- GRCC worked with GTC on various inputs like EPA Vehicle Class, Speeds, Daily VMT, # of Days of Operation per year
- Emissions analysis was based on assumptions of the fleet mix that would pursue CMAQ funds
- Once funding was in place, GTC staff worked with GRCC to develop a Request for Proposals to use the CMAQ funds

Continued Collaboration

- GRCC has membership from public and private fleet operators
- GRCC issued the RFP to its members and other interested fleet owners
- In 2008 GRCC selected projects to move forward
- About 65 vehicles among 6 fleet owners (2 public, 4 private)
- GRCC worked with fleet owners to move on vehicle acquisition
- In 2013, GTC worked to revise the emissions analysis based on the actual projects selected

Continued Collaboration

- During this time, it was determined that Buy America requirements for steel content should apply to vehicles
- GRCC worked with the fleet owners, vehicle dealers, and manufacturers to collect the documentation needed to satisfy the Buy America provisions
- Simultaneously, GTC worked with NYSDOT to pursue Buy America waivers that were eventually granted
- New vehicles still needed to be assembled and conversions needed to take place in the USA
- GRCC collected necessary documentation regarding assembly

Continued Collaboration

- There were many lessons learned in Round 1 that were used to establish Round 2
- GRCC worked with GTC to incorporate the data needs into the new RFP to facilitate subsequent air quality analyses
- In spring of 2016, GRCC was able to issue an RFP for Round 2
- Projects selected in fall 2016
- About 90 vehicles among 13 fleet owners (4 public, 5 private, 3 school district, 1 college)

Continuing Support for Alternative-Fueled Vehicles

- In June 2016, GTC adopted its current Long Range Transportation Plan; recommendations include:
 - ❑ 61. Encourage and support the expanded use of more energy efficient, alternative fuel vehicles (e.g., electric and hybrid) and retrofitted vehicles in public and private fleets
- Our partnership with GRCC is specifically mentioned in the discussion of this recommendation
- In August 2016, Governor Cuomo announced the availability of CMAQ funds for upstate New York
- GRCC has applied for CMAQ funds to continue this program and we hope to learn if they were successful in the near future

GENESEE TRANSPORTATION COUNCIL



GENESEE TRANSPORTATION COUNCIL

50 West Main Street-Suite 8112

Rochester, NY 14614

www.gtcmpo.org

upwp@gtcmpo.org

 @gtcmpo

The Metropolitan Planning Organization for the Genesee-Finger Lakes Region

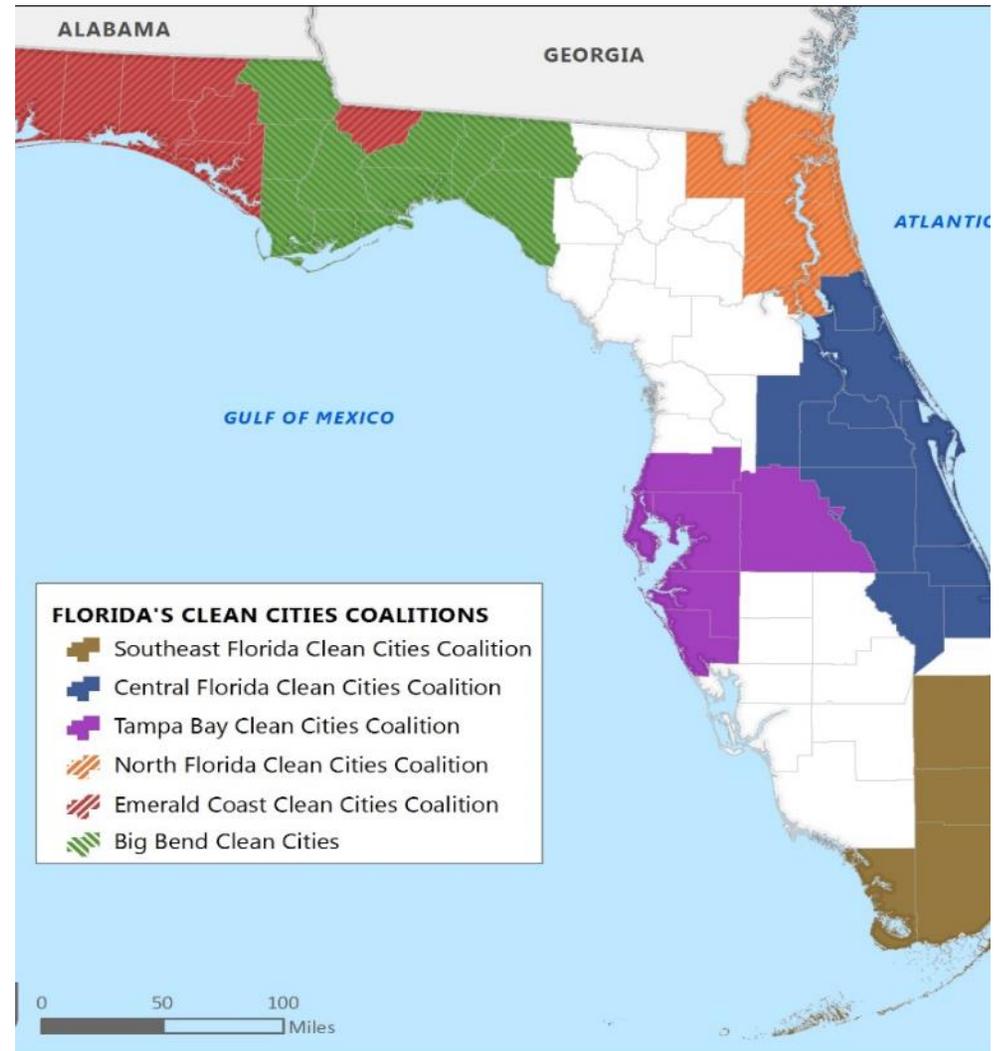
NORTH FLORIDA TPO SUPPORTS AFVS USING CMAQ FUNDS



NORTH FLORIDA TPO BACKGROUND



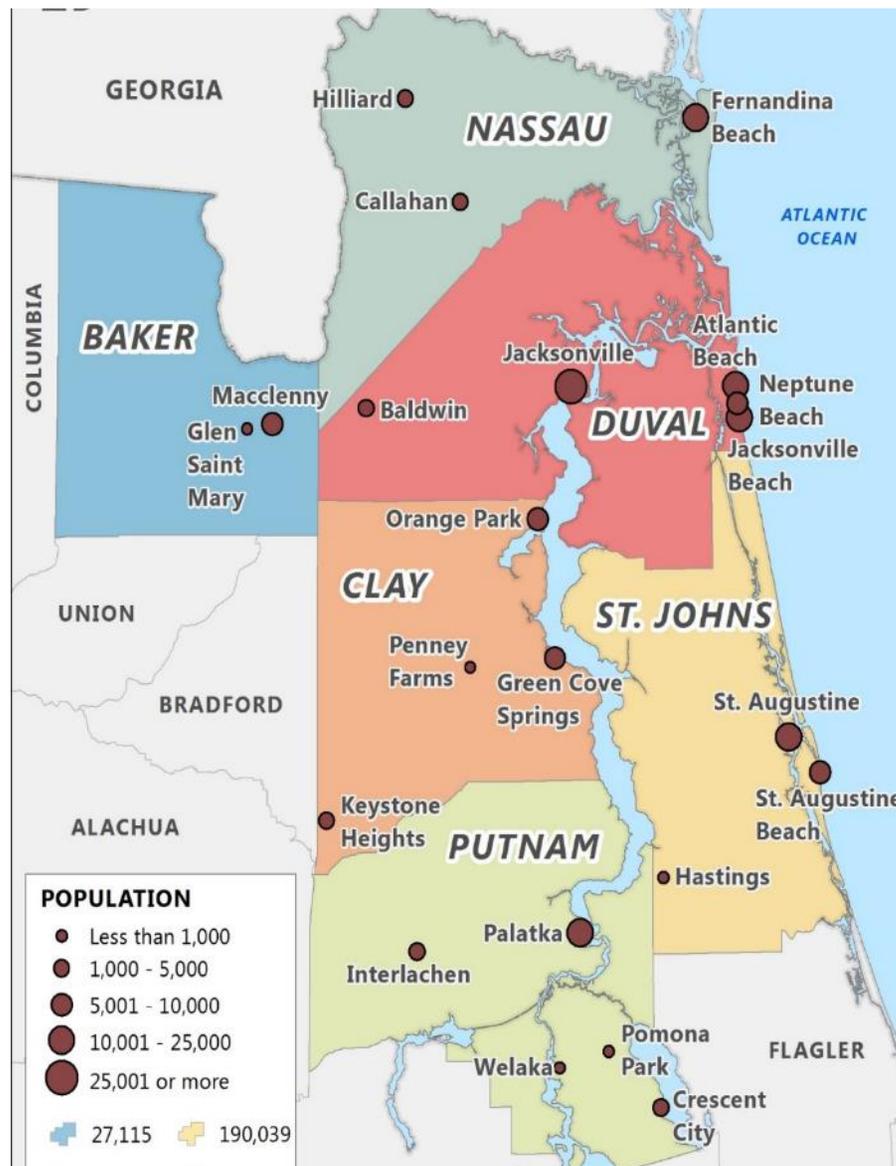
- » Service Area
 - 4 counties
 - 18 municipalities
 - 1.4 million people
 - 3,000 square miles





COALITION BACKGROUND

- » Founded in 2009
- » Designated April 12, 2016
- » Service Area
 - 6 counties
 - 22 municipalities
 - 1.5 million people
 - 4,000 square miles
- » Hosted by TPO
 - CMAQ Funded
 - Invested over \$5 million in alt. fuel vehicles and infrastructure projects





WHY PROMOTING AFVS IS IMPORTANT

- » It's part of an emerging economic development strategy to power North Florida's logistics and transportation industries with clean fuels.
- » The TPO is the region's recognized resource for advancing alternative fuels, vehicles and infrastructure.
- » Enhances the TPO's visibility, credibility and sustainability in the energy arena.



BALANCING FDOT INTEREST WHILE PROMOTING AFVS

- » Strong collaborative partnership with FDOT District II.
- » FDOT is very supportive of TPO initiatives.
- » FDOT is open to innovative TPO projects.

PROCESS FOR PROGRAMMING CMAQ FUNDS FOR AFV PROJECTS



- » North Florida receives approximately \$1.4 million in CMAQ funds annually.
- » The North Florida Alternative Fuels, Vehicles & Infrastructure Master Plan identifies fundable projects.
- » Counties within the TPO can submit eligible AFV projects.
- » The TPO Board approves the AFV projects.



LEVERAGING FUNDS

- » TPO dollars enhance stakeholder investments.
- » TPO dollars provide publicly accessible infrastructure that promotes greater availability.

CURRENT PROJECTS



ST. JOHNS COUNTY FLEET CONVERSION

With \$732,000 in North Florida TPO support, St. Johns County procured 108 CNG light and medium duty bi-fuel vehicles.

The County entered into a P3 with NoPetro to develop and operate a CNG fueling facility accessible to the public.

The project is in operation.





CURRENT PROJECTS



JTA PUBLIC ACCESS CNG STATION

The North Florida TPO allocated \$2.75 million to support JTA's transition to a CNG-fueled Bus Rapid Transit system.

The funding enabled construction of a public-access CNG fueling station developed via a P3. JTA will procure 100 CNG buses over five years, supported by private fueling infrastructure.

CURRENT PROJECTS



CITY OF JACKSONVILLE SANITATION VEHICLE TRANSITION

The North Florida TPO allocated \$315,000 to the City of Jacksonville to fund the incremental cost of seven CNG sanitation trucks.

The trucks fuel at JTA's public-access station.





CURRENT PROJECTS



FLORIDA EAST COAST RAILWAY FREIGHT LOCOMOTIVE CONVERSION

FEC is piloting four LNG-diesel hybrid locomotives and two tender cars along a 116 mile corridor south of Jacksonville.

\$375,000 from the North Florida TPO purchased one of four retrofit kits for \$375,000.

The project is expected to displace 80% of current diesel use.

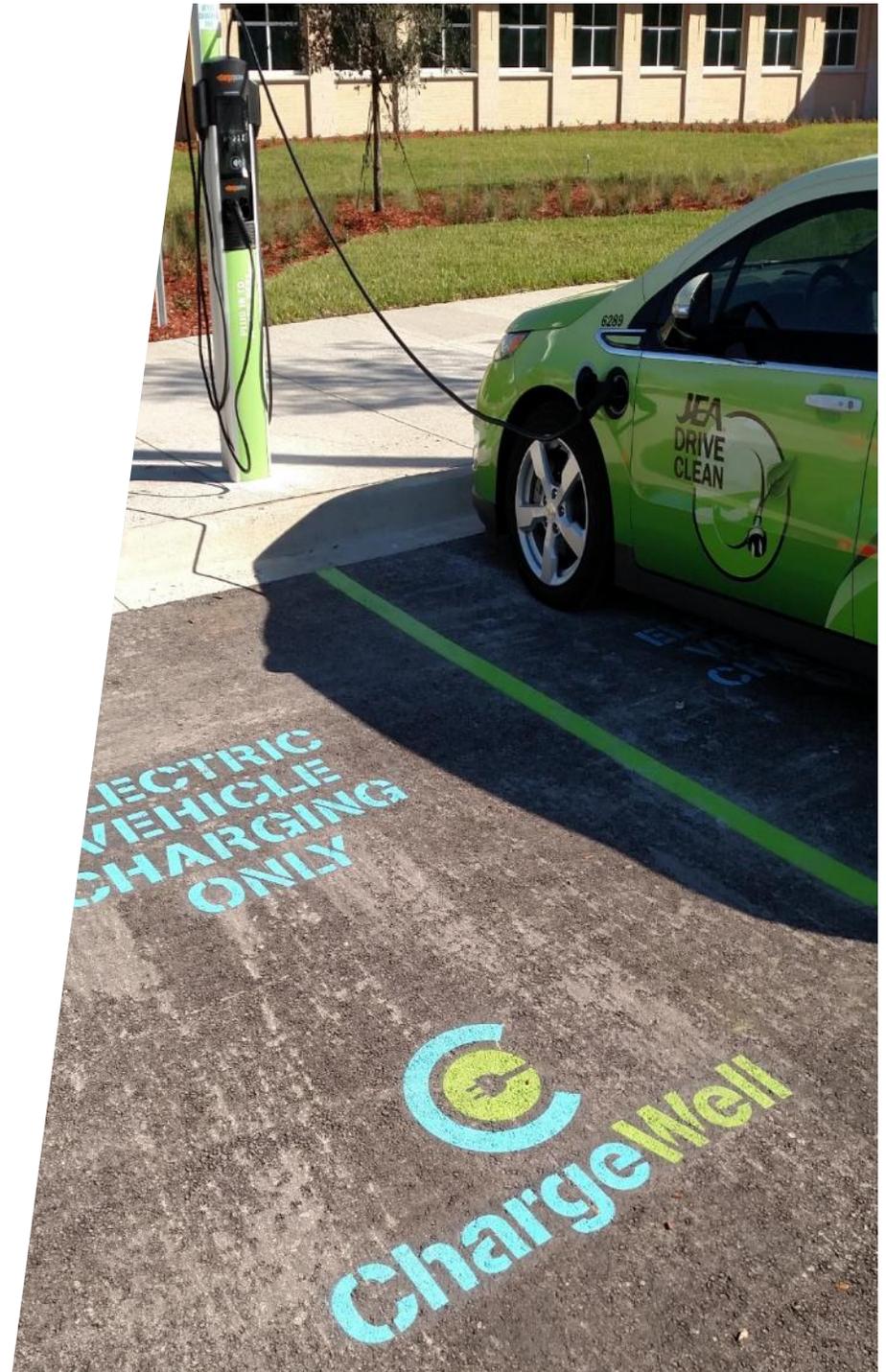
CURRENT PROJECTS



ELECTRIC VEHICLE CHARGING NETWORK

The North Florida TPO has partnered with JEA to invest \$300,000 in a regional EV charging network known as **ChargeWell**.

25 stations installed in Duval and Clay Counties; ties into JEA's Drive Clean program, which offers incentives to purchase EVs.



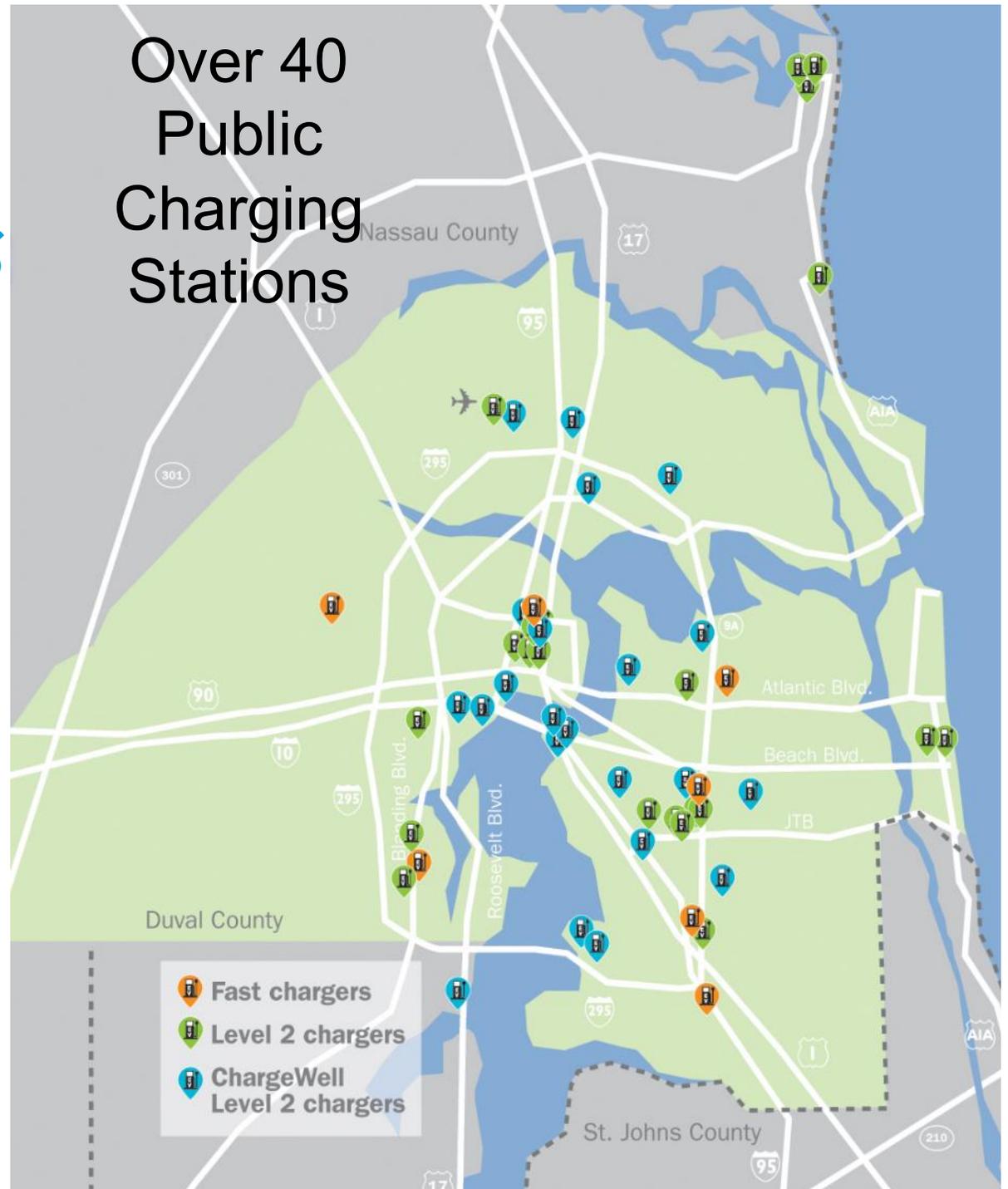
FUTURE PROJECTS

EXPAND ELECTRIC VEHICLE CHARGING NETWORK

The North Florida TPO has programmed \$450,000 to regionally expand **ChargeWell**.



Over 40
Public
Charging
Stations





The coalition's efforts are part of an emerging economic development strategy to power North Florida's logistics and transportation industries with clean fuels

CLEAN FUELS & LOGISTICS



RETURN ON INVESTMENT

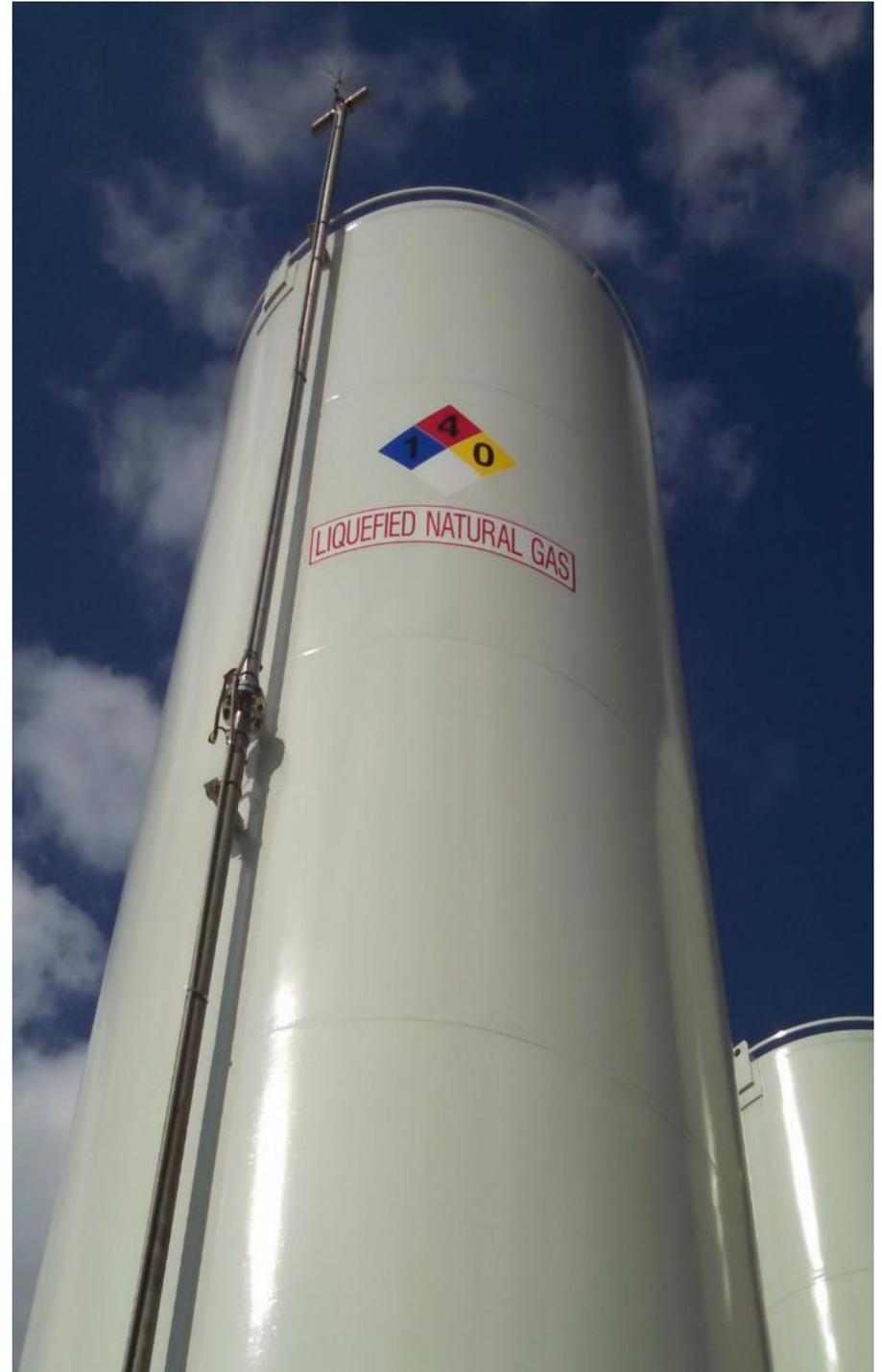
- » **\$30M** in leveraged stakeholder investment
- » **\$115M** in avoided fuel expenditures*
- » **95M gallons** of displaced petroleum fuel*
- » **800M kg** of avoided GHG emissions valued at **\$9M*#**
- » **\$42M net benefit to stakeholders***
- » **ROI 165%***

**Calculated over a 20 year common project life*

#Not included in net benefits or ROI estimates

SUMMARY

- » US DOE Designation confirms the Coalition's position as a regional center of excellence.
- » The Coalition has a strong strategic plan that maps targeted investments in market transformation.
- » As a public agency the TPO is connecting to the business community that affects their bottom line.
- » Prospective businesses are joining a region that is alternative fuel ready.



QUESTIONS

